SECTION 9-03, AGGREGATES
August 4, 2003

9-03.1(1) General Requirements
In the third paragraph, the third sentence is deleted.

9-03.1(5)B Grading
The second paragraph is supplemented with the following:

Standard sieve sizes shall be those listed in ASTM C 33.

9-03.4 Grading and Quality
The Sand Equivalent Minimum for Crushed Coverstone is revised from 32 to 40.

9-03.6(3) Test Requirements
The Sand Equivalent Value is revised from not less than 27 to not less than 35.

9-03.8(2) Test Requirements
The Sand Equivalent Minimum is revised as follows:

ACP Class A - from 37 to 45.
ACP Class B - from 37 to 45.
ACP Class E - from 37 to 45.
ACP Class F - from 27 to 35.
ACP Class G - from 37 to 45.

9-03.8(4) Blending Sand
The Sand Equivalent Minimum is revised from 27 to 30.

9-03.9(1) Ballast
The Sand Equivalent Minimum is revised from 27 to 35.

9-03.9(3) Crushed Surfacing
The percent passing the 1/2" square sieve for Top Course and Keystone is revised to "80-100".

The Sand Equivalent Minimum for Base Course is revised from 32 to 40.

The Sand Equivalent Minimum for Top Course and Keystone is revised from 32 to 40.

9-03.10 Aggregate for Gravel Base
The Sand Equivalent Minimum is revised from 27 to 30.

9-03.11 Recycled Portland Cement Concrete Rubble
The section including title is revised to read:

9-03.11 Vacant

9-03.12(2) Gravel Backfill for Walls
The Sand Equivalent Minimum is revised from 52 to 60.

9-03.12(3) Gravel Backfill for Pipe Zone Bedding

The Percent Passing for U.S. No. 200 is revised to read "10.0 max".

The Sand Equivalent Minimum is revised from 27 to 35.

9-03.14(1) Gravel Borrow

The Sand Equivalent Minimum is revised from 42 to 50.

9-03.14(2) Select Borrow

The Sand Equivalent Minimum is revised from 22 to 30.

9-03.15 Vacant

This section including title is revised to read:

> ### 9-03.15 Native Material for Trench Backfill
>
> Trench backfill outside the roadway prism shall be excavated material free of wood waste, debris, clods or rocks greater than 6 inches in any dimension.

9-03.20 Test Methods for Aggregates

The title for Test Method WAQTC FOP for T 27/11 is revised to read:

> Sieve Analysis of Fine and Course Aggregates and Aggregates in ACP

Gradation of Aggregates in ACP WSDOT FOP for AASHTO T 30 is deleted.

9-03.21 Recycled Material

This section along with sub-sections 9-03.21(1) and 9-03.21(2) are deleted in their entirety and replaced with the following new Section 9-03.21 with sub-sections 9-03.21(1), 9-03.21(2), 9-03.21(3) and 9-03.21(4).

9-03.21(1) General Requirements

Recycled materials that are identified below may be used as, or blended uniformly with, naturally occurring materials for aggregates. The final blended product shall meet the requirements for the specified type of aggregate. In addition, each recycled material component included in a blended product, shall meet the specific requirements listed below.

Recycled materials obtained from the Contracting Agency's roadways will not require testing and certification for toxicity testing or certification for toxicity characteristics.

For recycled materials that are imported to the job site, the Contractor shall certify that the recycled material is not a Washington State Dangerous Waste per the Dangerous Waste Regulations WAC 173-303. Sampling and testing for toxicity shall be at a frequency of one per 10,000 tons prior to combining with other materials and not less than one sample from any single source.

9-03.21(2) Recycled Asphalt Concrete Pavement

Recycled asphalt concrete pavement may be uniformly blended with the following materials, to the extent that the specified maximum bitumen content in the final product shall not exceed the following:

Maximum

		Bitumen Content (Percent)
Fine Aggregate for Portland Cement Concrete	9-03.1(2)	0
Coarse Aggregates for Portland Cement Concrete	9-03.1(4)	0
Aggregates for Asphalt Treated Base (ATB)	9-03.6	*
Aggregates for Asphalt Concrete	9-03.8	*
Ballast	9-03.9(1)	1.2
Shoulder Ballast	9-03.9(2)	1.2
Crushed Surfacing	9-03.9(3)	1.2
Aggregate for Gravel Base	9-03.10	1.2
Gravel Backfill for Foundations – Class A	9-03.12(1)A	1.2
Gravel Backfill for Foundations – Class B	9-03.12(1)B	1.2
Gravel Backfill for Walls	9-03.12(2)	0
Gravel Backfill for Pipe Zone Bedding	9-03.12(3)	0
Gravel Backfill for Drains	9-03.12(4)	0
Gravel Backfill for Drywells	9-03.12(5)	0
Backfill for Sand Drains	9-03.13	0
Sand Drainage Blanket	9-03.13(1)	0
Gravel Borrow	9-03.14(1)	0
Select Borrow	9-03.14(2)	1.2
Select Borrow (greater than 3 feet below subgrade and side slopes)	9-03.14(2)	8.0
Common Borrow	9-03.14(3)	1.2
Common Borrow - (greater than 3 feet below subgrade and side slopes)	9-03.14(3)	8.0
Foundation Material Class A and Class B	9-03.17	0
Foundation Material Class C	9-03.18	0
Bank Run Gravel for Trench Backfill	9-03.19	0

*See 5-04.2

The following field operating procedures will determine total bitumen content:

AASHTO T 308*
WSDOT TM 6

*The Contractor shall verify the asphalt content for the blended mix. A statewide average of 0.70 may be used as a calibration factor for AASHTO T-308.

9-03.21(3) Recycled Portland Cement Concrete Rubble

Recycled portland cement concrete rubble may be uniformly blended with the following materials, to the extent that the specified maximum concrete rubble content in the final product shall not exceed the following:

	Maximum Concrete Rubble (Percent)

Fine Aggregate for Portland Cement Concrete	9-03.1(2)	0
Coarse Aggregates for Portland Cement Concrete	9-03.1(4)	0
Aggregates for Asphalt Treated Base (ATB)	9-03.6	0
Aggregates for Asphalt Concrete	9-03.8	0
Ballast	9-03.9(1)	100
Shoulder Ballast	9-03.9(2)	100
Crushed Surfacing	9-03.9(3)	100
Aggregate for Gravel Base	9-03.10	100
Gravel Backfill for Foundations – Class A	9-03.12(1)A	100
Gravel Backfill for Foundations – Class B	9-03.12(1)B	100
Gravel Backfill for Walls	9-03.12(2)	100
Gravel Backfill for Pipe Zone Bedding	9-03.12(3)	100
Gravel Backfill for Drains	9-03.12(4)	100
Gravel Backfill for Drywells	9-03.12(5)	0
Backfill for Sand Drains	9-03.13	100
Sand Drainage Blanket	9-03.13(1)	100
Gravel Borrow	9-03.14(1)	100
Select Borrow	9-03.14(2)	100
Common Borrow	9-03.14(3)	100
Foundation Material Class A and Class B	9-03.17	100
Foundation Material Class C	9-03.18	100
Bank Run Gravel for Trench Backfill	9-03.19	100

9-03.21(4) Recycled Glass Aggregates

Recycled glass may be uniformly blended with the following materials, to the extent that the maximum recycled glass content in the final product shall not exceed the following:

		Maximum Recycled Glass (Percent)
Fine Aggregate for Portland Cement Concrete	9-03.1(2)	0
Coarse Aggregates for Portland Cement Concrete	9-03.1(4)	0
Aggregates for Asphalt Treated Base (ATB)	9-03.6	0
Aggregates for Asphalt Concrete	9-03.8	0
Ballast	9-03.9(1)	15
Shoulder Ballast	9-03.9(2)	15
Crushed Surfacing	9-03.9(3)	15
Aggregate for Gravel Base	9-03.10	15
Gravel Backfill for Foundations – Class A	9-03.12(1)A	15
Gravel Backfill for Foundations – Class B	9-03.12(1)B	15
Gravel Backfill for Walls	9-03.12(2)	15
Gravel Backfill for Pipe Zone Bedding	9-03.12(3)	15
Gravel Backfill for Drains	9-03.12(4)	100
Gravel Backfill for Drywells	9-03.12(5)	100
Backfill for Sand Drains	9-03.13	100
Sand Drainage Blanket	9-03.13(1)	100
Gravel Borrow	9-03.14(1)	100
Select Borrow	9-03.14(2)	100
Common Borrow	9-03.14(3)	100
Foundation Material Class A and Class B	9-03.17	100

Foundation Material Class C	9-03.18	100
Bank Run Gravel for Trench Backfill	9-03.19	100

The product supplier shall perform total lead content testing quarterly. Tests shall include a minimum of five samples. Sample collection shall be conducted according to ASTM D 75. Total lead content testing will be conducted according to EPA Method 3010/6010.

A test shall not exceed 250 ppm using a total lead analysis EPA Test Method 6010. In addition, the Toxicity Characteristics Leaching Procedure, EPA Test Method 1311 shall be used and a test shall not exceed 5.0 ppm. The product supplier shall keep all test results on file.

9-03.21(5) Steel Furnace Slag

Steel furnace slag may be uniformly blended with the following materials, to the extent that the specified maximum steel furnace slag content in the final product shall not exceed the following:

		Maximum Slag Content (Percent)
Fine Aggregate for Portland Cement Concrete	9-03.1(2)	0
Coarse Aggregates for Portland Cement Concre	9-03.1(4)	0
Aggregates for Asphalt Treated Base (ATB)	9-03.6	20
Aggregates for Asphalt Concrete	9-03.8	20
Ballast	9-03.9(1)	20
Shoulder Ballast	9-03.9(2)	20
Crushed Surfacing	9-03.9(3)	20
Aggregate for Grave	9-03.10	20
Gravel Backfill for Foundations – Class A	9-03.12(1)A	20
Gravel Backfill for Foundations – Class B	9-03.12(1)B	20
Gravel Backfill for Walls	9-03.12(2)	20
Gravel Backfill for Pipe Zone Bedding	9-03.12(3)	20
Gravel Backfill for Drains	9-03.12(4)	0
Gravel Backfill for Drywells	9-03.12(5)	0
Backfill for Sand Drains	9-03.13	0
Sand Drainage Blanket	9-03.13(1)	0
Gravel Borrow	9-03.14(1)	20
Select Borrow	9-03.14(2)	20
Select Borrow (greater than 3 feet below subgrade and side slopes)	9-03.14(2)	20
Common Borrow	9-03.14(3)	20
Common Borrow - (greater than 3 feet below subgrade and side slopes)	9-03.14(3)	20
Foundation Material Class A and Class B	9-03.17	20
Foundation Material Class C	9-03.18	20
Bank Run Gravel for Trench Backfill	9-03.19	20

The Contractor shall notify the Engineer the proposed steel furnace slag blends that will be used in the final product prior to use.